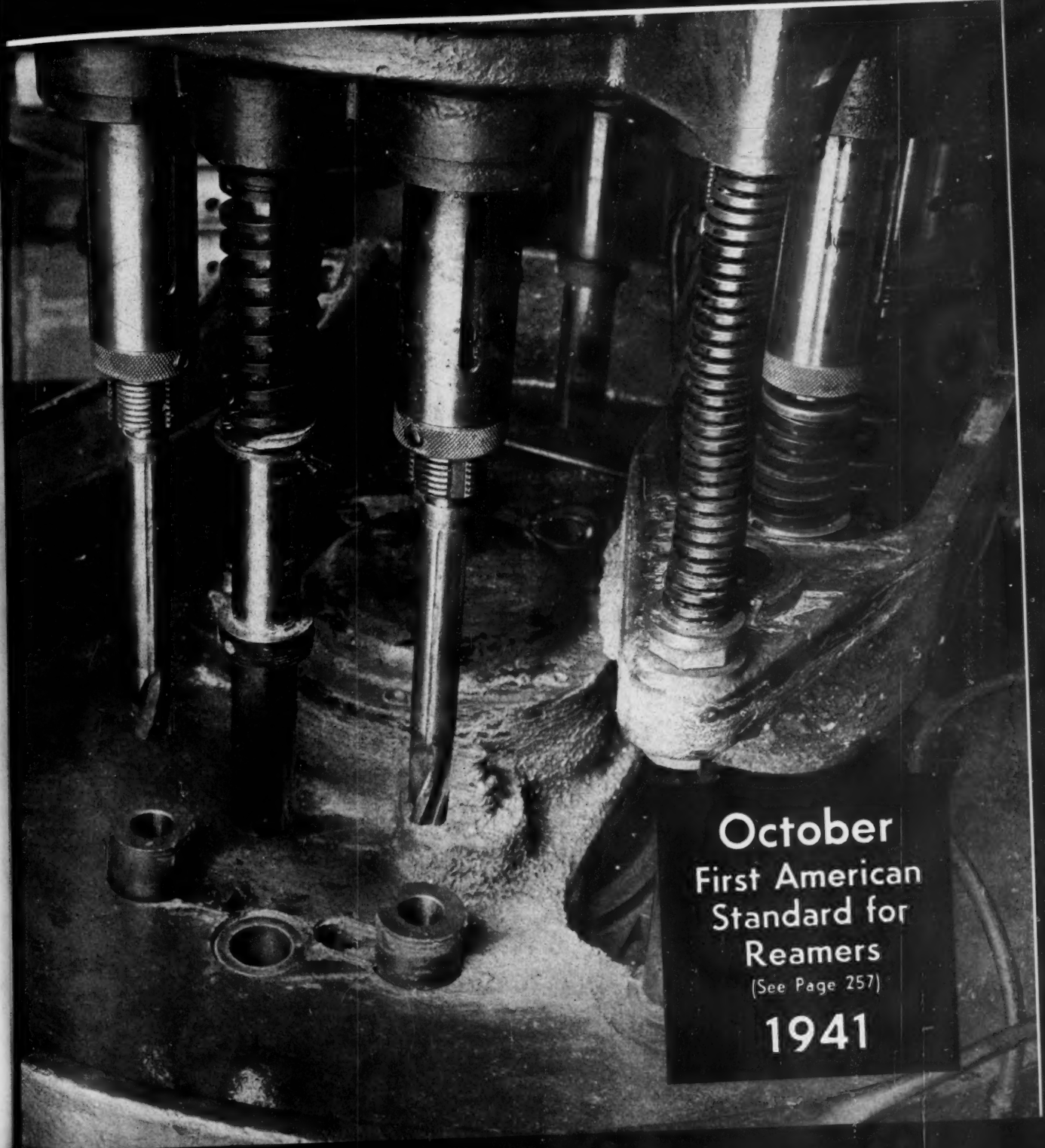
Industrial Standardization

and Commercial Standards Monthly



October

First American Standard for Reamers

(See Page 257)

1941

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And Commercial Standards Monthly

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RUTH E. MASON, Editor

Our Front Cover: Courtesy American Machinist.

This Issue

ASA

Reg. in U. S. Pat. Off.

Standardization is dynamic, not static. It means not to stand still, but to move forward together.

Subscription price $4.00 per year (foreign $5.00): Special to schools and libraries $2.00 (foreign $3.00); single copies 35 cents

October, 1941 Vol. 12, No. 10

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Industry could not be what it is today without standardization. In industry and in commerce, standardization, in a large measure, has been responsible for making possible the mass-production method of manufacturing so highly developed in this country. It is indeed true that many of the comforts of modern life, after having been made possible through engineering achievement, are made available to most of us only through this application of standardization. The modern automobile, particularly its power plant, is a wonderful engineering achievement, but its enjoyment by the great majority of people in this country is made possible only through the mass-production method of manufacture, the practical application of highly developed standardization.

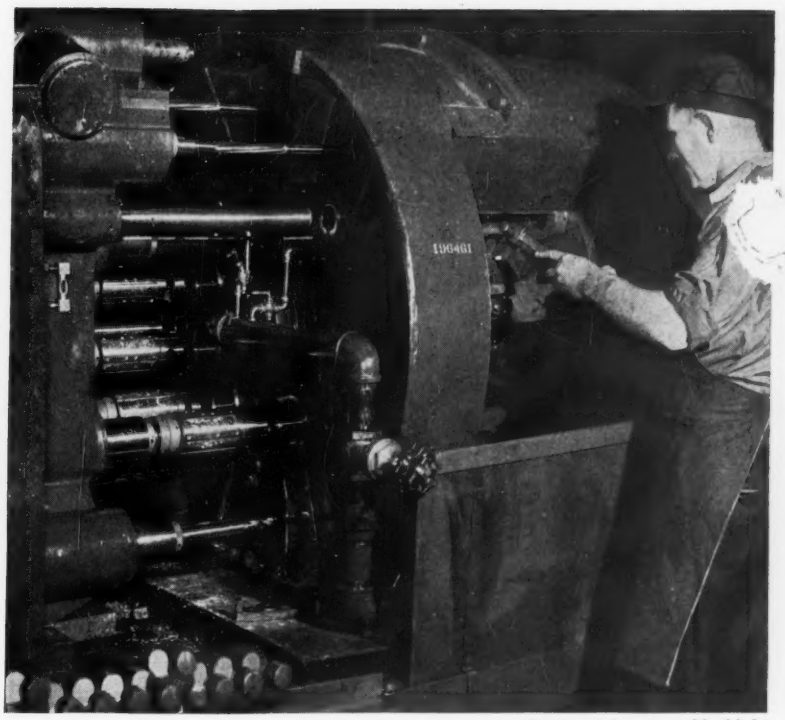
A criticism of standardization occasionally heard is that, because standards of measure are permanent, stable, and uniform, therefore standards in engineering and industry must tend to exert a regimenting influence and to retard progress by "freezing" current practice. The evidence on every hand and the rapid extension of standardization in recent years refute any such contention.

—F. Malcolm Farmer, President
American Institute of Electrical Engineers 1939-40

National unification settles questions of number of flutes for reamers and reamer tolerances

by Charles M. Pond[1]

Chairman, Technical Committee 20 on Reamers, ASA Sectional Committee on Standardization of Small Tools and Machine Tool Elements



Courtesy American Machinist

Here a reaming operation is performed on automobile steering knuckles

ASA Approves First American Standard for Reamers

PROBABLY the earliest mechanical operation was the making of a hole. Frequently the crude holes thus made were not large enough and it became necessary to increase their size. This was invariably done with a "reamer" which generally took the form of a triangular or square tool slightly tapered which was rotated by hand and passed entirely through the hole.

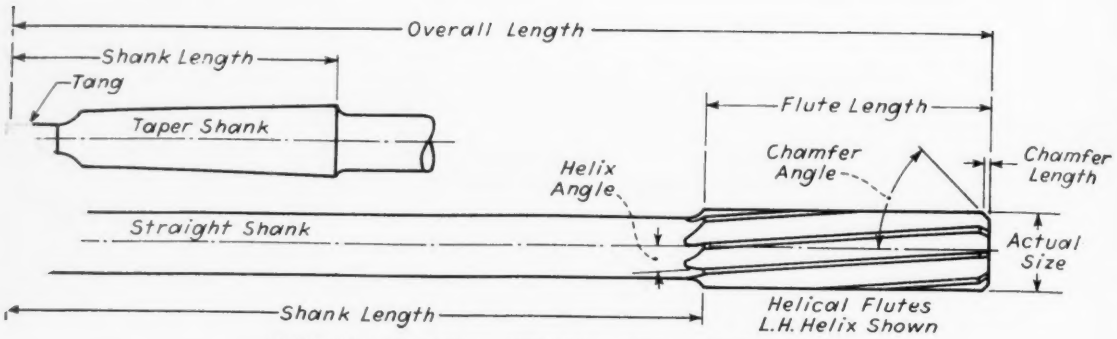
As time went on and greater degrees of accuracy were required, the design of the reamer gradually changed and as early as 1895 we find a definite agreement among tool manufacturers as to styles and sizes most suitable for manufacturing purposes.

The reamer is one tool which loses its original size after sharpening and, hence, the length of life is comparatively short.

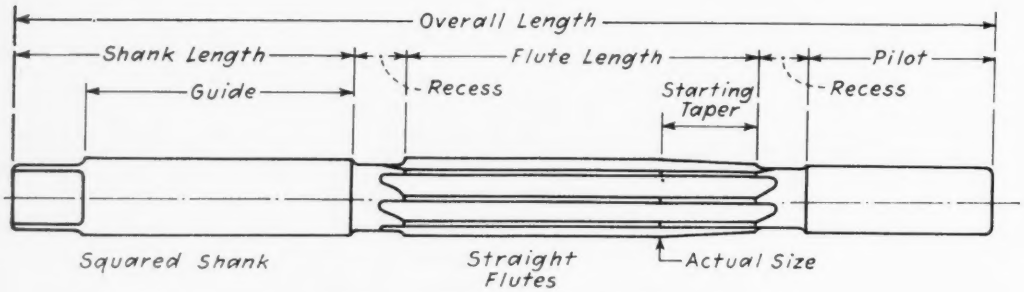
This has been a fertile field for inventors, who have designed many types of expanding and inserted blade reamers. Some of these have found favor with the manufacturers and, as a result, are readily obtainable in the American market.

Consequently, when Technical Committee 20 on Reamers of the ASA Sectional Committee on Small Tools and Machine Tool Elements was appointed in the Spring of 1937, the members soon decided that their efforts would have to be confined to the solid reamers, with the possible exceptions of a few of the so-called expanding types. The design of these latter has become more or less uniform through constant use. Fortunately, manufacturers of reamers had started a standardization program a great many years ago so that by the time the committee took hold, the major details had already been settled and it remained only to clear up the controversial

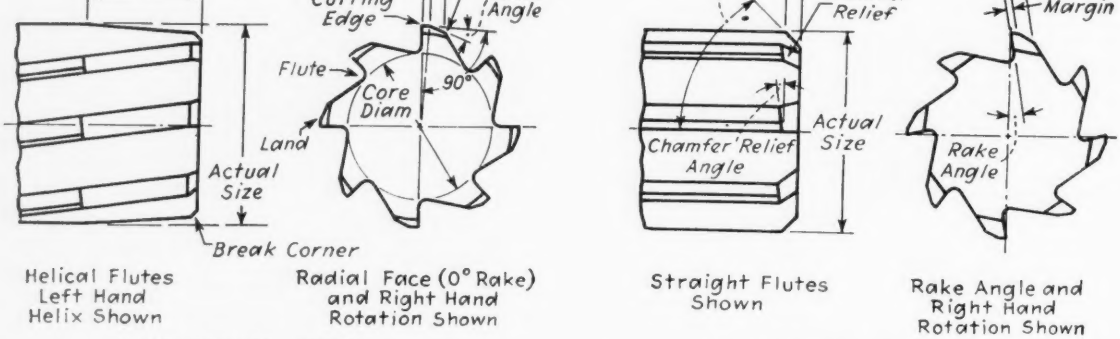
[1] Vice-president, Pratt & Whitney, Niles-Bement-Pond Co., West Hartford, Connecticut.



CHUCKING REAMER, STRAIGHT AND TAPER SHANK



HAND REAMER, PILOT AND GUIDE



HAND REAMER POINT

MACHINE REAMER POINT

This chart shows the standard names for reamer parts agreed upon by the ASA committee

points so that the majority of users would be fully satisfied.

Requests were made that the number of flutes be standardized, as this particular feature seemed to be governed by the experience of various engineers and users and there was no uniformity of opinion as to just what number of flutes constituted the best practice under all conditions. Furthermore, it was felt by the committee that some individual leeway should be allowed. A range of flute numbers was established, therefore, which seemed to be satisfactory to all concerned.

Probably the most controversial point was the size of the reamer. Every user wanted a reamer of a size to meet his own manufacturing practice. Some even wanted the tolerance to be basic to

minus. After considerable discussion and tabulating of general practice, a series of tolerances was worked out which seemed to satisfy the majority. Here again, some manufacturers choose to work to closer limits, yet at the same time keeping within the ASA standard tolerance.

In co-operation with Professor O. W. Boston, chairman of Technical Committee No. 17 on Nomenclature of ASA committee B5, a standard for terminology and definitions was prepared. The accompanying sketch outlines a very satisfactory agreement on nomenclature.

While the American Standard constitutes a uniform basis for manufacturing, yet it does not in any way limit a manufacturer's individuality in producing quality tools. The kind of steel, the hardness, finish, degree of relief, and many other elements are left to the tool manufacturer's judgment. He may follow the general dimensions laid out, without being handicapped in improving his product.

The work of the technical committee proceeded rapidly and, with the aid of W. C. Mueller, chairman of committee B5, it was completed in a comparatively short time considering the size of the project. The committee wishes to express its appreciation for the many suggestions which it received and the co-operative spirit of all those who took part in its discussions. As is always the case when a standard is first brought out, discrepancies may be found and changes will be suggested, but it is believed that this initial work will be found practical and sound.

Friendships made in the committee will be long enduring. A glance at the roll indicates the wide field from which the personnel was drawn.

W. L. Barth, Standards Section, General Motors Corporation, Detroit, Mich.

H. W. Bearce, chief, Division of Weights and Measures, National Bureau of Standards, Washington, D. C.

Wm. Baumbeck, Rock Island Arsenal, Rock Island, Ill. (*alternate*)

C. H. Borneman, supervisor, Tool and Gage Department, General Electric Company, Schenectady, N. Y.

G. L. Buffington, Ex-Cell-O Corporation, Detroit, Mich.

J. K. Clement, Lt. Colonel, Executive Officer, New York Ordnance District, U. S. War Department, New York, N. Y.

F. H. Colvin, editor emeritus, American Machinist, McGraw-Hill Publishing Company, New York, N. Y.

H. P. Gee, Chrysler Corporation, Dodge Plant, Detroit, Mich.

T. F. Githens, mechanical engineer, Cleveland Twist Drill Company, Cleveland, Ohio

E. E. Griffiths, director, Time Study and Methods Department, Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa.

J. H. Horigan, secretary, Union Twist Drill Company, Athol, Mass.

O. E. Koehler, chief engineer, Greenfield Tap and Die Corporation, Greenfield, Mass.

C. J. Oxford, factory superintendent, chief engineer, National Twist Drill and Tool Company, Detroit, Mich.

T. W. Ragan, Planning Standards, Western Electric Company, Hawthorne Plant, Chicago, Ill.

F. S. Walter, supervisor of small tools and supplies, Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa. (*Retired*)

H. E. Wells, former superintendent, Tool Division, General Electric Company (*Retired*)

C. M. Pond, vice-president, Pratt & Whitney Division, Niles-Bement-Pond Company, West Hartford, Conn., *Chairman*

The work of the Technical Committee, as part of the project on Standardization of Small Tools and Machine Tool Elements, is sponsored by the American Society of Mechanical Engineers, the National Machine Tool Builders' Association, and the Society of Automotive Engineers.

In addition to the new American Standard for Reamers (B5.14-1941), which is available from the American Standards Association at 75 cents per copy, other tool and machine tool standards approved by the ASA include:

Tool Holder Shanks and Tool Post Openings, Dimensions of (B5b-1929) 25¢

Milling Cutters (B5c-1930) 75¢

T-Slots—Their Bolts, Nuts, Tongues and Cutters (B5.1-1941) 35¢

Taps, Cut and Ground Threads (B5.4-1939) $1.25

Rotating Air Cylinders and Adapters (B5.5-1932) 35¢

Jig Bushings (B5.6-1941) 35¢

Circular and Dovetail Forming Tool Blanks (B5.7-1936) 40¢

Chucks and Chuck Jaws for Turret Lathes and Automatic Lathes (B5.8-1936) 45¢

Lathe Spindle Noses for Turret Lathes and Automatic Lathes (B5.9-1936) 50¢

Machine Tapers (B5.10-1937) 50¢

Adjustable Adapters for Multiple Spindle Drilling Heads (B5.11-1937) 50¢

Twist Drills (B5.12-1940) 55¢

Terminology and Definitions for Single-Point Cutting Tools (B5.13-1939) 40¢

Involute Splines, Side Bearing (B5.15-1939) 65¢

Accuracy of Engine Lathes American Defense Emergency Standard (B5.16-1941) 25¢

Copies of these standards may be ordered from the American Standards Association.

Legal Aspects of Standardization And Simplification

A Discussion from the Point of View of the Lay Worker

by P. G. Agnew

Secretary, American Standards Association

AN extraordinary amount of confusion has arisen in the business press in the last few months in regard to the legal aspects of standardization and simplification.

There is confusion as to the difference between the process of setting up a standard and the use of the standard after it has been set up.

There is confusion as to the relation of simplification to standardization.

The situation is made still more complex by confusion between standardization and a regimentation which would require everyone to wear identical hats, live in identical houses, eat identical food, and think identical thoughts.

This confusion is not limited to the press but, in cases, extends to opinions prepared by legal counsel, and even to official documents.

The confusion seems to arise, not only from a lack of understanding of the law, but also from a lack of definition of terms—of specifying precisely what action is being considered, and who does what.

It is everywhere recognized that standardization and simplification are in the public interest.

Everyone knows that it is legal to make an ax—and that it is legal to use an ax for a great many purposes. But a man cannot use an ax for *some* purposes without breaking the law.

Just so, it is legal to make a standard—and it is legal to use the standard for many purposes. But to use a standard for *some* purposes may be illegal. The danger lies in parties at interest entering into agreements as to uses of the standard that may be illegal.

A layman might suggest that the typical, if not almost the only case, where the use of a standard might be illegal, would be the case where the use is a material part of a combination or agreement that legally is in restraint of trade.

This point is stated explicitly in a letter by Thurman Arnold, Assistant Attorney General, to the New York Journal of Commerce on March 26, 1940. The Journal had published an article in reference to the consent decree in the Southern Pine case, in which the attitude of the Department of Justice toward standardization was discussed. Mr. Arnold's letter was in reply to the Journal's article. In it he said:

> "Thus it will be seen that standardization programs in and of themselves are not condemned by the Department. It is the wrongful use to which such programs have been put that has been questioned."

NOTE: This discussion should be read with the official correspondence of the Attorney General and the defense agencies (pages 264-267).—EDITOR.

Three Ways of Using Standards

It is important to distinguish between three ways of using a standard:

First, a standard may stand as advice, or as a recommendation to industry, any company having complete freedom to use it or not.

Second, a standard may be made mandatory by some governmental agency, federal, state, or local, having the legal authority to take such action.[1]

Third, parties at interest may enter into an agreement as to the use of the standard.

As has been pointed out, most standardizing bodies keep their standards in the first of these ways. The term "voluntary standard" is widely

[1] For a discussion of statutory standards see Jacob Aronson's article in the ASA BULLETIN for August, 1931, page 22, entitled "Legal Issues Involved in Buying and Selling Under Statutory Commodity Standards." See also "Legal Aspects of Standardization—Legal Issues Involved in Buying and Selling Under Statutory Standards Reviewed" by Jacob Aronson in COMMERCIAL STANDARDS MONTHLY for December, 1931, page 184.

used by engineers for a standard having this status. Lawyers with whom I have discussed the matter are of the opinion that this is not a good term for the purpose since, from the strictly legal point of view, "voluntary" means non-mandatory, and hence may include the third as well as the first method of using standards. In view of the importance of standards having this first status, they should, perhaps, be given a distinctive name such as "advisory standards" or "free standards", to indicate that their use is neither mandatory under the law nor subject to trade agreement among parties at interest.

It is in the third way of using standards, by agreement between parties at interest, that the possibility of illegality lies.

Experience of the American Standards Association

It may be useful to note the experience of the American Standards Association in this matter. Since its organization in 1918, it has been the policy and the practice of the Association to keep each American Standard, be it a dimensional standard, a material specification or a method of test, before the public on its own merits, as advice to industry and to the world at large, as setting forth the best way of accomplishing the purpose for which it is intended. Any unit of industry is free to use the standard or not. As stated in one of the Association's Year Books, approval of a standard by the ASA means that the ASA "has satisfied itself that all organizations concerned have had an opportunity to participate in the work, that the work has been carried out under a procedure that has been regular, open, and above board, and that the standard represents a real national consensus on what is best in American engineering and industrial practice, and hence that it either already does or may reasonably be expected to play a significant, if not a controlling, role in regard to the materials and processes in the industry concerned."

In passing, it is interesting to compare this procedure with a principle phrased by Sir John Salmond: "There is in general no better evidence of the justice of an arrangement than the fact that all persons whose interests are affected by it have freely and with full knowledge consented to it."

The work of the Association has led to many uneconomical sizes and varieties of products being abandoned, but in no case has any agreement to make or not to make, to use or not to use a product had any place in the Association or its committees. In the development of this policy and practice, very little attention has been paid to legal considerations. Almost everyone in the Association seems to have assumed, as stated by the Supreme Court in the Maple Flooring case, that standardization activities are in the public interest: "The defendants have engaged in many activities to which no exception is taken by the Government and which are admittedly beneficial to the industry and to consumers; such as cooperative advertising and the standardization and improvement of its product."

On the contrary, the main emphasis has been upon the underlying economics. For example, the work of the Association has resulted in the abandonment of 4½ inch steel pipe because its use was uneconomical, but the committee that did the work never considered entering into any agreement not to make or not to use 4½ inch pipe. A special situation may justify this size. Furthermore, it is quite conceivable that unforeseen conditions might arise which would make it economical to reintroduce the 4½ inch pipe as a standard size.

Standards handled in this way provide just such flexibility as is needed to meet changing economic conditions.

Most technical organizations doing standardization work follow, I believe, very similar policies and practices.

Some confusion has arisen from a phrase which is frequently used in the development of standards by these methods. It is often said that a committee "has agreed upon a standard" when there is not the slightest intention or thought on the part of any member of the committee of doing anything more than agreeing upon a standard to serve as a recommendation to industry. This is a very different thing than it would be for the members to enter into an agreement that the organizations which they represent will either make or not make, or will use, or not use, a product.

It often happens that a standard which has been developed and is maintained by a standardizing body on a purely voluntary basis is adopted by a governmental agency and legally enforced under the legal powers of the agency. For example, some fifty American Standard Safety Codes developed and maintained by the ASA upon a purely voluntary basis have been widely adopted and given the force of law by the various state governments, in order to protect the public on the one hand and the employees in industry on the other hand. Similarly, some of these same standards, and others such as the American Standard Safety Code for Elevators, have been taken over by city governments and legally enforced.

To recapitulate, the American Standards Association has throughout its existence followed the simple policy that every standard developed through its procedure must stand on its own merits as advice to those concerned with the subject; that any concern is free to use the stand-

ard or not; and that in the case of standards suitable for legal enforcement for the protection of persons or property, the question of enforcement is left entirely to the proper public authorities.

Correspondence Between the Attorney General and the OPA

The practice of the ASA, which has been outlined above, seems to be in complete accord with the principles laid down in recent correspondence of the Department of Justice and the defense agencies. This correspondence should clear up much of the present confusion in regard to the legality of standardization and simplification. It goes much further than any other official pronouncement in defining terms, in distinguishing between the ways in which standards are used, and in saying who does what.

The correspondence outlines the procedure which the OPA is following in utilizing the services of "the American Standards Association or some other competent body" in standardization and simplification work for the defense program.

The text of the following three of these letters will be found on pages 264-267.

Attorney General Jackson to the Office of Price Administration and to the Office of Production Management, April 29, 1941.

The General Counsel of OPA to Attorney General Biddle, September 25, 1941.

Attorney General Biddle to the General Counsel of OPA, September 27, 1941.

The first letter by Attorney General Jackson lays down the general principles of procedure under which the two defense agencies, OPM and OPA, are now cooperating with industry on the one hand, and with the Department of Justice on the other. One of the main features of this letter is the emphasis placed upon the difference between advice and recommendations on the one hand, and authoritative action by a governmental agency on the other. For example, in discussing the functions of the industry advisory committees organized by OPA, Attorney General Jackson said: "Each industry committee shall confine itself to collecting and analyzing information and making recommendations. . . ." and it shall not "attempt to compel or to coerce any one to comply with any request or order made by a public authority." And in another connection, ". . . the function of determining what steps should be taken in the public interest should in each case be exercised by the public authority which may seek the individual or collective advice of the industry. But the determination shall not be made by the industry itself or by its representatives." The letter mentions such fields as the curtailment of some kinds of production, priorities, price ceilings and allocation of orders.

The letter makes no specific mention of standardization or simplification. It deals of course only with cooperative activities of the defense agencies with industry and with other agencies. It provides that "requests for action within a given field, such as the field of allocation of orders, shall be made only after the general character of the action has been cleared with the Department of Justice."

The last two letters listed above seem to constitute such formal clearance for the "field" of standardization and simplification.

The letter from the General Counsel of OPA to the Attorney General outlines the procedure which the OPA is following in utilizing the services of the American Standards Association:

"(3) Standards considered may include one or more of the following items:

"(*a*) Nomenclature.
"(*b*) Uniformity in dimensions to provide for interchangeability of parts and supplies or the interworking of apparatus.
"(*c*) Specifications for materials and products.
"(*d*) Methods of test or inspection.
"(*e*) Methods of rating machinery or apparatus.
"(*f*) Safety standards.
"(*g*) Rules for the operation of apparatus or machinery.
"(*h*) Concentration upon the optimum number of types."

These types include nearly all of those used by industry in standards having to do with products. They include, for example, all of the work of the American Standards Association.

The procedure shows clearly which steps consist of advice or recommendation, and which steps are to be enforced by legal authority of the OPA, or by definite agreements with industry by the OPA:

"(1) Proposals for standardization and simplification will be made to the Office of Price Administration by defense agencies, government departments, manufacturers, distributors, consumers, and others.

"(2) At the request of this Office, the American Standards Association or some other competent body will assist it in the organization of committees representative of these various groups and others designated by this Office. Invitations to meetings to discuss, formulate and revise simplification and standardization plans will be issued by this Office . . . .

"(4) The discussion of standards and simplification programs at these meetings will be informative and advisory only. Unless and until any specific plan is approved by its General Counsel's office as outlined in paragraph

(5), this Office will not request members of an industry to adopt it, nor make any agreements with them for its adoption, nor attempt to enforce it in any way.

"(5) If, as, and when approved by the General Counsel's office of the Office of Price Administration, the Office may request the adoption by the industry of such simplification and standardization plans. It may also, under like circumstances, make agreements with members of the industry for the adoption of such plans. Or it may promulgate and undertake the enforcement of such plans with such authority as, at the time, it has at its disposal. In no case will the American Standards Association or any non-governmental agency take any part in the enforcement of the program."

In his reply of September 27, Attorney General Biddle approves the general character of this procedure, and states that in his view it will be subject to the policy of the Department of Justice described in Attorney General Jackson's letter of April 29 referred to above, which contains this statement:

"Acts done in compliance with the specific requests made by the Office of Production Management or the Office of Price Administration and Civilian Supply and approved by their General Counsel in accordance with the procedure described in this letter will not be viewed by the Department of Justice as constituting a violation of the antitrust laws and no prosecutions will be instituted for acts performed in good faith and within the fair intendment of instructions given by the Office of Production Management or the Office of Price Administration and Civilian Supply pursuant to this procedure."

The attitude of the Department of Justice toward standardization is stated in general terms by Thurman Arnold, Assistant Attorney General, in the letter to the New York Journal of Commerce, under date of March 26, 1940, quoted on page 260.

Thus the correspondence of the Federal agencies makes clear the difference between the use of a standard as advice or recommendation, and its use by agreement or through legal enforcement; and, implicitly, the legality of the voluntary use of standardization and simplification as advice or recommendation.

The Simplification Work of the National Bureau of Standards

Since the organization of its Division of Simplified Practice in 1921, the National Bureau of Standards has kept its simplification work on a strictly voluntary basis. This is made plain to everyone concerned, first, by the name "Simplified Practice Recommendation", which is printed on each of the series of documents which contain the results of the various simplification undertakings; second, by the following carefully worded statements printed on the acceptance blanks:

"*Definition.*—A simplified practice recommendation may be defined as a list of sizes, varieties, types, or grades of products which has been approved for regular stock purposes, after superfluous variety has been eliminated; or it may be defined as a simplified method. Recommendations are developed by voluntary cooperation among manufacturers, distributors, consumers, and other interests, upon the initiative of any of these groups. . . .

"*Acceptance.*—Acceptance of any recommendation is entirely voluntary, and implies that the acceptor will use his best efforts to adhere to the recommended practice, where requirements are not special. Instances may occur when it may become necessary to supply or purchase items not covered by a simplified practice recommendation, and acceptors should understand that such departures are not precluded.

" . . . The Department (of Commerce) has no regulatory powers with respect to simplified practice . . .".

The legality of this simplification work has been discussed as follows by Thurman Arnold, Assistant Attorney General, in a letter dated August 12, 1941 to the Under Secretary of Commerce:

"Confirming our personal conversation of August 11, I concur fully in the proposition that the more general adoption of 'Simplified Practice' as developed by the National Bureau of Standards in cooperation with various industries, would constitute an important aid to national defense.

"I am also in accord with your well-considered purpose to encourage and stimulate manufacturers and others affected to exchange with you constructive suggestions concerning simplification and its relation to conservation of scarce materials and other industrial items, standardization, specifications, unification of specifications, and substitute materials.

"I understand from your plan of procedure that simplification and standardization proposals will originate with defense agencies, the Department of Commerce and industry, and that conferences will be held with representatives of specific industries and interested Government agencies to obtain advice and information on particular proposals.

"In my view, continued adherence to the specific purpose of simplification will not raise any questions under the Federal antitrust laws."

The Relation Between Standardization and Simplification

The words *standardization* and *simplification* are used with many variations of meaning, as is always the case with words whose linguistic roots go back thousands of years.

The main use of the word *simplification* in this country is the same as that used in the work of the Division of Simplified Practice of the National Bureau of Standards. In the terminology used by the Bureau, the process of *simplification* results in a *simplified practice recommendation*—just as the process of *standardization* results in a *standard*. As has been stated, the

Bureau's wording is: "A simplified practice recommendation may be defined as a list of sizes, varieties, types, or grades of products which has been approved for regular stock purposes, after superfluous variety has been eliminated."

The word *simplification* very aptly describes the process. It is convenient, and is widely used. Logically, simplification is one kind of standardization. The word was introduced in this country by Herbert Hoover in 1921, when he was Secretary of Commerce. The inspiration for this work came from the experience of the Conservation Division of the War Industries Board during the last War, which Division was headed by A. W. Shaw. One reason for the introduction of the word *simplification* with this meaning was to avoid the implication of regimentation which is often imputed to the word *standardization*.

The idea of selection or of delimitation is inherent in the very nature of standardization. For example, whenever we set up a dimensional standard, as for bolts and nuts, or rivets or wheels, we select a restricted number of sizes from the existing or possible sizes which might be chosen, *i.e.*, we delimit or simplify the number of sizes. But this is also true of all kinds of standards as, for example, items (*a*) to (*h*) in the correspondence quoted above. Each kind of standard defines an object, or a product, or a method, and in each case we delimit the object, the product, or the method by the very act of defining it. Whenever we standardize we simplify.

Simplification differs from other kinds of standardization, for example from dimensional standardization, mainly in the method of approach. In simplification work, first consideration is usually given to sales records so as to eliminate slow-moving items; while in setting up other kinds of standards technical considerations are usually of prime importance. In simplification we fix our attention upon the things which we wish to eliminate; while in other kinds of standardization we fix our attention upon the things we wish to keep and to concentrate upon. In simplification we "eliminate unnecessary types, sizes, and grades of products". In standardization we "concentrate upon the optimum number of types, sizes and grades of products".

Simplification can often be used advantageously as a preliminary to the development of technical standards.

Summary

It is everywhere recognized that standardization and simplification are in the public interest.

It is legal to make a standard. It is legal to use the standard for many purposes. But to use a standard for some purposes may be illegal. The danger lies in parties at interest entering into agreements as to uses of the standard that may be illegal.

This view is implicit in recent correspondence of the Department of Justice and the defense agencies. In Mr. Arnold's letter to the New York Journal of Commerce, quoted on page 260, he has stated it explicitly.

The Correspondence Between the Attorney General and the Defense Agencies

OFFICE OF THE ATTORNEY GENERAL
WASHINGTON, D. C.

April 29, 1941

JOHN LORD O'BRIAN, ESQ.,
General Counsel,
Office of Production
Management,
Washington, D. C.

DEAR JOHN:

The marshaling of the nation's industrial assets for a maximum productive effort in the national defense will doubtless require the allocation of orders, the

curtailment of some kinds of production so as to increase production in defense fields, and the establishment of priorities and price ceilings. Furthermore, many of these steps must necessarily affect the production of goods used to satisfy our normal needs, as well as the production of materials and implements used directly in our defense effort.

Some of these acts if accomplished by private contract or arrangement within an industry and carried on for private advantage would probably constitute violations of the antitrust laws. On the other hand, it is obvious that in the present emergency acts performed by industry under the direction of public authority, and designed to promote public interest and not to achieve private ends, do not constitute violations of the antitrust laws. In these circumstances, the Department of Justice recognizes that business interests which are asked to comply with public plans for increasing production and preventing inflation are entitled to the cooperation of agencies of the Government in eliminating any uncertainties which may exist as to the application of the antitrust laws to their activities.

Accordingly, this Department has formulated a policy which it proposes to follow in its relations with the Office of Production Management and the Office of Price Administration and Civilian Supply and with all industries or contractors acting in compliance with the orders or requests of either of these organizations. The important points of this policy are:

Meetings of the industry with the Office of Production Management and the Office of Price Administration and Civilian Supply or their representatives are not illegal. Industrial committees may be formed at the request of the Office of Production Management or the Office of Price Administration and Civilian Supply, to work with representatives of such offices on problems involving defense. There will be nothing unlawful in the industry cooperating in the selection of its representatives or in selecting members for committees, or in the activities of such committees provided they are kept within the scope of this letter.

Questions as to whether there is need for such a committee, and if so, how it shall be chosen, and by whom constituted, shall be the sole responsibility of the Office of Production Management or the Office of Price Administration and Civilian Supply. This Department will not participate in these decisions beyond the suggestion now made that any such committee should be generally representative of the entire industry and satisfactory to the Office of Production Management or the Office of Price Administration and Civilian Supply.

Each industry committee shall confine itself to collecting and analyzing information and making recommendations to the Office of Production Management or the Office of Price Administration and Civilian Supply, and shall not undertake to determine policies for the industry, nor shall it attempt to compel or to coerce any one to comply with any request or order made by a public authority.

All requests for action on the part of any unit of an industry shall be made to such unit by the Office of Production Management or the Office of Price Administration and Civilian Supply and not by the industry committee. That is to say, the function of determining what steps should be taken in the public interest should in each case be exercised by the public authority which may seek the individual or collective advice of the industry. But the determination shall not be made by the industry itself or by its representatives.

Requests for action within a given field, such as the field of allocation of orders, shall be made only after the general character of the action has been cleared with the Department of Justice. If the general plan is approved, thereafter each request for specific action in carrying out such plan shall be made in writing and shall be approved by the office of the General Counsel of the Office of Production Management or the office of the General Counsel of the Office of Price Administration and Civilian Supply, but need not be submitted to the Department of Justice. In the case of any change in the personnel of such offices or if serious practical difficulties arise, this latter arrangement may be revoked upon notice from me.

Acts done in compliance with the specific requests made by the Office of Production Management or the Office of Price Administration and Civilian Supply and approved by their General Counsel in accordance with the procedure described in this letter will not be viewed by the Department of Justice as constituting a violation of the antitrust laws and no prosecutions will be instituted for acts performed in good faith and within the fair intendment of instructions given by the Office of Production Management or the Office of Price Administration and Civilian Supply pursuant to this procedure.

In the case of all plans or procedure, however, the Department reserves complete freedom to institute civil actions to enjoin the continuing of acts or practices found not to be in the public interest and persisted in after notice to desist.

With kind personal regards,

Sincerely,
(Signed) ROBERT H. JACKSON
Attorney General

OFFICE OF PRICE ADMINISTRATION AND CIVILIAN SUPPLY

WASHINGTON, D. C.

September 25, 1941

HONORABLE FRANCIS BIDDLE
Attorney General of the United States
Department of Justice
Washington, D. C.

MY DEAR MR. BIDDLE:

In his letter of April 29, 1941, addressed to Mr. Leon Henderson, Adminstrator of the Office of Price Administration, your predecessor, Attorney General Jackson, outlined a policy which he said the Department of Justice was prepared to follow "in its relations with the Office of Production Management and the Office of Price Administration . . . and with all industries or contractors acting in compliance with the orders or requests of either of these organizations." He pointed out, by way of preface, that in "marshaling . . . the nation's industrial assets for a maximum productive effort in the national defence," steps might need to be taken which "if accomplished by private contract or arrangement within an industry and carried on for private advantage would probably constitute violations of the antitrust laws." But he recognized the desirability of such acts during the emergency when done at the request of, with the approval of, and under the supervision of the Office of Price Administration. One condition of your Department's not viewing such acts as a violation of the antitrust laws that he set out was that "the general character of the action" requested of industrial groups be first cleared with your Department.

This Office, through its Consumer Division, is now prepared to assist manufacturers, distributors, consumers, and others in adopting a program of simplification and standardization of various lines of products. This is desirable in view of the shortage, present or impending, of many important raw materials. It is important, particularly during a period of price rises and possible quality changes, as a means of protecting consumers who are generally unfamiliar with product differentiation and nomenclature. And it will be essential in view of the growing importance of price ceilings set by this office and of the difficulty of formulating and administering such ceilings when an industry turns out an unnecessarily large variety of sizes, styles, and qualities. The procedure which will be followed in working out simplification systems will in general be this:

(1) Proposals for standardization and simplification will be made to the Office

of Price Administration by defense agencies, government departments, manufacturers, distributors, consumers, and others.

(2) At the request of this Office, the American Standards Association or some other competent body will assist it in the organization of committees representative of these various groups and others designated by this Office. Invitations to meetings to discuss, formulate, and revise simplification and standardization plans will be issued by this Office.

(3) Standards considered may include one or more of the following items:

(*a*) Nomenclature.
(*b*) Uniformity in dimensions to provide for interchangeability of parts and supplies or the interworking of apparatus.
(*c*) Specifications for materials and products.
(*d*) Methods of test or inspection.
(*e*) Methods of rating machinery or apparatus.
(*f*) Safety standards.
(*g*) Rules for the operation of apparatus or machinery.
(*h*) Concentration upon the optimum number of types.

(4) The discussion of standards and simplification programs at these meetings will be informative and advisory only. Unless and until any specific plan is approved by its General Counsel's office as outlined in paragraph (5), this Office will not request members of an industry to adopt it, nor make any agreements with them for its adoption, nor attempt to enforce it in any way.

(5) If, as and when approved by the General Counsel's office of the Office of Price Administration, the Office may request the adoption by the industry of such simplification and standardization plans. It may also, under like circumstances, make agreements with members of the industry for the adoption of such plans. Or it may promulgate and undertake the enforcement of such plans with such authority as, at the time, it has at its disposal. In no case will the American Standards Association or any non-governmental agency take any part in the enforcement of the program.

This letter is written to request your approval of our operating under this general outline.

Sincerely yours,
(Signed) DAVID GINSBURG
General Counsel

OFFICE OF THE ATTORNEY GENERAL

WASHINGTON, D. C.

September 27, 1941

DAVID GINSBURG, ESQ.
General Counsel
Office of Price Administration
Washington, D. C.

DEAR SIR:

I have your letter of September 25, 1941, in which you request my approval of a course of action which the Office of Price Administration proposes to take in order to effect the simplification and standardization of various lines of products.

I understand that in the opinion of the Office of Price Administration this program is a measure necessary for the national defense and that it will be carried out in the manner described in your letter and in compliance with the terms of the letter which Attorney General Jackson sent to Mr. Henderson on April 29, 1941. I approve the general character of this action and in my view it will be subject to the antitrust law enforcement policy of the Department of Justice which is described in Attorney General Jackson's letter to Mr. Henderson of April 29, 1941.

Sincerely yours,
(Signed) FRANCIS BIDDLE
Attorney General

Standard Samples Check Laboratory Reliability

Standard samples issued by the National Bureau of Standards set mark for laboratories in testing in metallurgy, ceramics, agricultural products, iron and steel, cement, gas and coal tests, polarimetry, and pyrometry

by H. A. Bright

Standard Samples, Metal and Ore Analysis Section, Chemistry Division, National Bureau of Standards

SPECIFICATIONS that contain chemical and physical requirements require methods for test. To check the accuracy and suitability of such tests, material of certified composition or standards of reference are extremely useful. The result has been the evolution of the standard analyzed sample.

This may be defined as a material resembling as closely as possible in chemical and physical nature the material with which the chemist expects to deal, and which has been analyzed by a sufficient number of methods and analysts to establish its average composition with considerable certainty. If, then, a standard and a sample of material under test are analyzed at the same time (and under practically identical conditions), and results are obtained for the standard corresponding to those that are certified, the presumption is strong that the figures obtained for the unknown material are equally accurate. Wide divergence from the certified results for the standard shows at once that something is wrong, such as improper methods, faulty manipulation, or impure reagents.

Thus, in the simplest possible manner and in the shortest possible time, a large number of variable factors can be simultaneously investigated with almost the same result as though each had been taken up separately.

History of the Standard Samples of the National Bureau of Standards

When the chemical division of the National Bureau of Standards was organized, it was but natural that it should sooner or later be confronted with the requirements of the industry for standard samples. In 1905 the American Foundrymen's Association turned over to the Bureau its standardized pig-iron samples, comprising four sets and covering a considerable range of compositions. The Bureau had not participated long as a distributor of these irons before it was realized from the numerous inquiries received that the preparation of other materials for the steel industry was in order, and consequently the issuing, at nominal prices, of various kinds of steel samples, non-ferrous metals, ores, and other materials was begun and is being actively continued.

Representative samples are pictured on page 269.

It is obviously impossible to prepare and issue standard samples of all materials the analyst may encounter. The National Bureau of Standards has, however, endeavored to prepare samples that are representative of different groups, and such substances as are needed for the standardization of solutions and the calibration of instruments.

The list now includes 122 standards of such diverse materials as limestone, feldspar, fluorspar, bauxite, and phosphate rock; ores of iron, manganese, and zinc; soda-lime, opal and other glasses; gray and alloy cast irons; carbon and alloy steels; brass, bronzes, aluminum alloys, zinc-base die-casting alloys, bearing metals; metals of certified melting points; cements for testing sieves; thermoelectric standards; and chemicals for oxidimetric, acidimetric, saccharimetric and calorimetric values.

Complete List Is Available

The complete list of standard samples together with analysis, prices, and other information is given in the Supplement to Circular No.

398, which can be obtained free of charge upon application to the National Bureau of Standards, Washington, D. C.

Standards of Reference

In addition to the standards already enumerated, the Bureau distributes standards of reference which have been compared with master samples at the Bureau, or measured for compliance with an arbitrary standard. Among these are:

Standard viscosity samples (oils)
Lovibond glasses for colors of oils, etc.
Standards of radiation (incandescent lamps)
Lamp standards of color temperature
Glass opacity standards for the paper industry
Glass standards for the calibration of spectrophotometers
Radon standards, 10^{-9} and 10^{-11} g
Gamma-ray standards, 0.1 x 10^{-6} to 100.0 x 10^{-6} g
Standard finish samples for builders' hardware
Standard colors for sanitary ware, kitchen and bathroom accessories

Information concerning these standards can be obtained by applying to the Bureau.

New Standards in Preparation

Two new molybdenum-tungsten high-speed steels and high-sulfur stainless steel are in preparation. Plans are being made to supply small solid sections of a number of the Bureau's analyzed standards of ferrous and non-ferrous metals to be used as spectrochemical standards. There are also in preparation standards for use in macro- and micro-organic analysis of compounds of carbon, hydrogen, nitrogen (nitro and amino), halogens, sulfur, and phosphorus.

Uses of the Standard Samples

The principal uses of the Bureau's standard samples can be summarized as follows:

First:—In checking methods of chemical analysis that control the manufacture and sale of metallurgical, ceramic, and agricultural products.

Second:—In the avoiding or settling of disputes between buyers and sellers. Such disputes very frequently arise through the use of inappropriate or faulty methods by the analysts, and can be avoided by checking the methods against standard samples.

Third:—In standardizing calorimeters for gas and coal tests and polorimeters for sugar tests.

Fourth:—In standardizing pyrometers for use in the annealing and heat treatment of irons and steels and other metallurgical products.

Fifth:—For checking sieves that are used to determine whether cements meet fineness or surface area requirements.

Sixth:—In investigating improved and more rapid methods of analysis.

Seventh:—In research work in educational institutions.

For these purposes the standard samples issued by the National Bureau of Standards enjoy a world-wide reputation. During the year 1940 approximately 11,000 samples were distributed in the United States and 1,000 abroad.

These Samples

- Provide means for calibrating instruments
- Form a standard of laboratory accuracy and efficiency
- Make for national uniformity in test methods
- Provide standards for laboratory accuracy

ASTM Considers Asking ASA To Approve 31 Standards

The American Society for Testing Materials has informed the American Standards Association that the ASTM is considering submitting to the ASA some 31 ASTM standards. These standards, and the ASTM committees which recommended to the ASTM that it request ASA approval, are:

ASTM Committee A-3 on Cast Iron.

Specifications for Cast-Iron Culvert Pipe (A 142-38)
Specifications for Lightweight and Thin-Sectioned Gray-Iron Castings (A 190-40)

Committee C-7 on Lime.

Specifications for Quicklime for Structural Purposes (C 5-26)
Methods of Chemical Analysis of Limestone, Quicklime, and Hydrated Lime (C 25-29)

Committee C-15 on Manufactured Masonry Units.

Specifications for:

Structural Clay Load-Bearing Wall Tile (C 34-41)
Concrete Building Brick (C 55-37)
Structural Clay Non-Load-Bearing Tile (C 56-41)
Structural Clay Floor Tile (C 57-39)
Sand-Lime Building Brick (C 73-39)
Hollow Load-Bearing Concrete Masonry Units (C 90-39)
Hollow Non-Load-Bearing Concrete Masonry Units (C 129-39)
Concrete Masonry Units for Construction of Catch Basins and Manholes (C 139-39)
Solid Load-Bearing Concrete Masonry Units (C 145-40)

Methods of Sampling and Testing:

Brick (Modulus of Rupture, Compressive Strength, Absorption, Freezing and Thawing) (C 67-41)
Structural Clay Tile (C 112-36)
Concrete Masonry Units (C 140-39)

Committee D-1 on Paint, Varnish, Lacquer, and Related Products

Methods of Sampling and Analysis of Shellac (D 29-40)

Standard Specifications for:

Dry Bleached Shellac (D 207-35)
Orange Shellac (D 237-41)
Shellac Varnishes (D 360-41)

Committee D-11 on Rubber and Rubber Products

Sample Preparation for Physical Testing of Rubber Products (D 15-41)
Chemical Analysis of Rubber Products (D 297-40 T) (To be submitted when this tentative standard is adopted by the ASTM as standard)
Testing Rubber Hose (D 380-40 T) (When adopted as standard)
Tension Testing of Vulcanized Rubber (D 412-41)
Test for Adhesion of Vulcanized Rubber (Friction Test) (D 413-39)
Test for Accelerated Aging of Vulcanized Rubber by the Oxygen-Pressure Method (D 572-41)
Test for Accelerated Aging of Vulcanized Rubber by the Oven Method (D 573-41)

Committee D-13 on Textile Materials

Specifications for Textile Testing Machines (D 76-41)
Methods of Testing Wool Felt (D 461-40)

Committee D-19 on Water for Industrial Uses

Method of Reporting Results of Analysis of Industrial Waters (D 596-41)

Committee E-1 on Methods of Testing

Specifications for ASTM Thermometers (E 1-39)

Any comments on the approval of these standards should be forwarded to the American Standards Association office promptly. Copies of the standards may be obtained from the ASTM, 260 South Broad Street, Philadelphia.

Rosenwald Heads New OPM Conservation Bureau

An OPM Bureau of Conservation, to include sections on conservation, reclamation of scarce materials, specifications, and simplification, has been set up in the Division of Purchases under the direction of Lessing J. Rosenwald. The new Bureau, which corresponds in general to the Conservation Division of the former War Industries Board, will consolidate all OPM activities on these subjects. Its activities do not, however, include the work being done under the OPA Consumer Division to establish uniform standards of quality and performance.

Mr. Rosenwald was formerly chairman of the Board of Sears, Roebuck & Co.

National Bureau of Standards Releases Staff Men to OPM

E. W. Ely, chief of the Division of Simplified Practice, National Bureau of Standards, and Robert A. Martino of the Bureau's codes and specifications section, have been released by the Department of Commerce to the OPM to work with the new Conservation Bureau.

The National Bureau of Standards announces that in connection with the new set-up it has changed its procedure to make it possible for the government to initiate simplification projects, either through the OPM or the Department of Commerce. Hitherto, only non-governmental organizations have had the authority to initiate these projects.

ASTM Takes Action On Standards for 1941

250 committee meetings, largest number in any ASTM meeting week, pile up record attendance at ASTM annual meeting; 75 new specifications and tests are published for the first time.

INTENSIVE interest in the field of engineering materials, particularly in development of greater knowledge of materials and in standardization of specifications and tests, was evident at the Forty-fourth Annual Meeting of the American Society for Testing Materials in June.

The registered attendance of members, committee members, and guests exceeded that of any other meeting, reaching a total of 1553. Over 250 committee meetings were held—more than in any other ASTM meeting week.

Progress in standardization is indicated by the 75 new specifications and tests published for the first time, many providing quality requirements and procedures for testing important engineering materials and products.

Iron and Steel

The report of Committee A-1 on Steel included seven new specifications, the preparation of which has been under way for some time. One of them, based on an existing consumer specification covering hot-worked high-carbon steel tie plates, was adopted immediately as standard. The other six are being published in tentative form for a year or more before adoption as standard. One covers low-alloy structural steel with compositions such that the material is weldable, intended for use as main stress-carrying material of structural members. If purchased for welding the manufacturer must submit information indicating that the chemistry is suitable for this purpose.

New specifications for ring and disk forgings complete the series which Committee A-1 started last year to provide modernized requirements. There are nine carbon grades and six alloy with tensile strength ranging from 47,000 up to 125,000 psi. Perhaps outstanding in the group of new specifications was the one for carbon and alloy steel blooms, billets, and slabs for forgings which will eventually replace an existing standard.

The new heat-treated wrought steel wheels standard provides three classes of this material.

For some time there has been persistent demand that the Steel Committee develop quality specifications for steel sheets, and after having the benefits of information developed by manufacturers' technical committees during the past 18 months, Committee A-1 approved two new standards for flat-hot-rolled carbon steel of structural quality, the first item covering material 0.2499 and 0.0478 in. in thickness, and the second, 0.0477 to 0.0225 in. in thickness.

An extensive report was presented by Committee A-5 on Corrosion of Iron and Steel recommending the adoption of Specifications for Zinc-Coated Steel Wire Strand (Galvanized and "Extra Galvanized") (A 122-39 T), Zinc-Coated Steel Wire Strand (Class B and Class C Coatings) (A 218-39 T), Test for Uniformity of Coating by the Preece Test (Copper Sulfate Dip) on Zinc-Coated (Galvanized) Iron or Steel Articles (A 239-40 T).

Of outstanding significance, the ASTM announces, was the report of Committee A-3 on Cast Iron with its newly recommended practice for evaluating the microstructure of graphite in gray iron. The practices are the result of extensive cooperative studies by Committee A-3 and the Committee on Classification of Graphite in Cast Iron of the American Foundrymen's Assn.

The procedure covers the classification of flake graphite in gray cast iron by comparison with two charts illustrating standard structures. Appended to the practice is a recommended procedure for polishing microsections of cast iron.

Non-Ferrous Metals and Alloys

Three new standard tests were approved as a result of the work of Committee B-4 on Electrical-Heating, Electrical-Resistance, and Electric-Furnace Alloys, one covering temper of strip and sheet metals for electronic devices which is of particular concern to the radio industry. The method covers the procedure for determining the temper of strip and sheet metals for electronic devices in thicknesses of 0.010 in. or less, by means of measurements of the "spring-back" when the specimen is released after bending in the prescribed manner.

The other two methods cover procedures for testing lateral wire for grids of electronic devices and for testing round wire for supports used in electronic devices and lamps.

The first report of Committee B-8 on Electrodeposited Metallic Coatings, formally organized this spring, included two proposed new standards covering electrodeposited coatings of nickel and chromium on copper and copper-base alloys, and electrodeposited coatings of nickel and chromium on zinc and zinc-base alloys. The first of these provides three types of coating. The chromium, if required, is the same in each, namely, 0.00001 min, while the minimum nickel is 0.0005, 0.0003, 0.0001, respectively. The requirements for nickel and chromium on zinc alloys include copper requirements, final nickel, and chromium (if required). In this specification the salt-spray test is employed to determine the continuity of coatings and they are not to show appreciable corrosion after exposures of 48, 32, and 16 hours respectively.

In a most voluminous report, Committee B-5 on Copper and Copper Alloys, Cast and Wrought, recommended the publication of thirteen new tentative specifications of which seven cover copper-alloy sand castings, three cover rods, bars and shapes of various compositions including red brass, aluminum bronze castings, copper-nickel-zinc, and tin bronze. A new standard for copper sheet, strip and plate provides seven types ranging in tensile properties from 30,000 to 52,000 psi min. Various types are as follows: Type A, Electrolytic tough pitch copper; type B, phosphorized copper, high residual phosphorus; type C, oxygen-free copper without residual metallic deoxidants; type D1, silver-bearing copper, tough pitch; type D2, silver-bearing copper, phosphorized; type D3, silver-bearing copper; oxygen-free; type E, arsenical tough pitch copper.

Two of the new tentative standards are tests—one for expansion of copper and copper-alloy tubing, and the other for mercurous nitrate test for copper and copper alloys. The latter is an accelerated corrosion test for the purpose of determining in copper or copper-base alloy products or assemblies the presence of applied (external) or residual (internal) stresses, or a combination of these stresses, which might bring about failure of the material in service or storage through stress corrosion or season cracking. In this test, a suitable specimen is subjected to the effects of mercury corrosion, mercury being provided by displacement of that metal from an acidified aqueous solution of mercurous nitrate by the metal of the specimen.

"Too much stress can hardly be laid upon the importance of specifications in this emergency," declares the Executive Committee of the American Society for Testing Materials in its Annual Report for 1941.

"The country is facing today a period when specifications and methods of test are going to be wanted quickly, when changes must be made figuratively over night, and the Society must be prepared to take the initiative in such work and carry it through vigorously and with minimum delay.

"It is very gratifying, therefore, that the committee work of the year reveals so much progress in the direction of standards useful in the emergency. The spring meetings contributed greatly to this progress since, being in Washington, it was possible for many representatives of the Government departments to attend and discuss requirements in specifications important to defense.

"However, so much pressing work of this kind lies ahead of the Society that we can in no sense be satisfied with the work so far accomplished but must continuously be on the alert to provide standards for materials as needed."

Plastics

One entire session of the annual meeting was devoted to plastics, including the report of Committee D-20 and five technical papers. Proposed new standards were offered the Society and accepted covering test for deformation of plastics under load at elevated temperatures, preconditioning plastics and electrical insulating materials, prepared in cooperation with Committee D-9 on Electrical Insulating Materials, and test for color fastness of plastics to light.

Textile Materials

A number of recommendations submitted by Committee D-13 on Textile Materials were approved:

Medium-Weight Cotton Corduroy Fabrics (D 625-41 T)

Fire-Retardant Properties of Treated Textile Fabrics (D 626-41 T)

Evaluating Compounds Designed to Increase Resistance of Fabrics and Yarns to Insect Pests (D 627-41 T)

Asbestos Tubular Sleeving (D 628-41 T)

Quantitative Analysis of Textiles (D 629-41 T)

Commercial Weight of Continuous Filament Rayon Yarns (D 258-41 T)

Commercial Weight of Spun Rayon Yarns and Threads (D 507-41 T)

Water for Industrial Uses

One phase of the work of the American Society for Testing Materials which is relatively new—at least in comparison with the work under way in other fields—is that on water for industrial uses. The Society's Committee D-19 has during the last two years stimulated the presentation of a great deal of data and the discussion of test procedures. A number of standards already developed include Methods of Sampling Plant or Confined Waters for Industrial Uses (D 510-40 T), Method of Reporting Results of Analysis of Industrial Waters (D 596-40 T), and a Method for Determination of the Hydroxide Ion in Industrial Waters (D 514-38 T). These three methods are being recommended this year for adoption as standard.

Road and Paving Materials

One of the important developments of this session was a new tentative standard covering tests for modified miscibility and cement mixing of emulsified asphalts. This is based on an exhaustive investigation and provides important requirements for medium and slow setting types of emulsions. The test is not applicable to the quick-setting type.

Committee D-18 on Soils for Engineering Purposes has developed a new standard test to determine the weight per cubic foot of soil under a standard compaction, for varying moisture contents of such a range as to show the maximum dry weight per cubic foot. In compaction work, which is widely used for many construction jobs, it is important to have such a test. The new test is being submitted to letter ballot for reference to the Society.

Petroleum Products and Lubricants

An extensive and important report was offered this year by the Society's Committee D-2 on Petroleum Products and Lubricants. A most important function of the committee is the standardizing of test procedures for various properties of petroleum products. Four of the new tentative standards developed by the committee provide such tests, covering Aniline Point of Petroleum Products, Carbonizable Substances in Paraffin Wax, similar to the present Tentative Method of Test for Carbonizable Substances in White Mineral Oil (D 565-40 T), Ignition Quality of Diesel Fuels, and Knock Characteristics of Aviation Fuels, developed by the Cooperative Fuel Research Committee. Also completed were specifications for aviation gasoline.

ASTM Elects Lundell President; Names Harvey Vice-President

G. E. F. Lundell, chief, Chemistry Division, National Bureau of Standards, succeeds W. M. Barr as president of the American Society for Testing Materials, it was announced at the ASTM annual meeting. Dean Harvey, Materials Engineer, Engineering Laboratories and Standards Department, Westinghouse Electric and Manufacturing Company, is vice-president, serving with H. J. Ball, Professor of Textile Engineering, Lowell Textile Institute, who was elected vice-president in 1940.

The American Society for Testing Materials is an active member of the American Standards Association. Through its representatives on the ASA Standards Council it has a voice in the initiation of new standardization projects and in final approval of American Standards. The ASTM is also represented on the Electrical Standards Committee, the United States National Committee of the International Electrotechnical Commission, the Mechanical Standards Committee, the Building Code Correlating Committee and the Advisory Committee on Ultimate Consumer Goods.

Electrical Insulating Materials

Committee D-9 on Electrical Insulating Materials offered for acceptance four new standards—one specification covering round phenolic laminated tubing for radio applications and three tests. One of these covers punching quality of laminated phenolic sheets and another volatile matter content of vulcanized fiber, and the last preconditioning plastics and electrical insulating materials.

Rubber

Of much importance are three proposed standards recommended by Committee D-11 on Rub-

ber Products covering tests for automotive air brake and vacuum brake hose, tear resistance of vulcanized rubber, and test for compression fatigue of vulcanized rubber. The first of these new standards was developed by Technical Committee A on Automotive Rubber in response to urgent requests of automotive engineers and state highway departments for suitable standards for the control of the brake hose used on licensed vehicles on the highways. The status of air brake hose and vacuum brake hose is similar to that of hydraulic brake hose for which suitable methods were approved last year. The use of inferior or defective hose on vehicles equipped with these braking systems is especially serious from a safety viewpoint because of their widespread application to automotive vehicles and to heavy trucks in particular.

Timber and Fire Tests

Committee D-7 on Timber recommended the adoption as standard of the Tentative Method of Test for Tar Acids in Creosote and Creosote-Coal Tar Solutions (D 453-39 T); also, the approval of a new definition of water-gas tar.

Committee C-5 on Fire Tests of Materials and Construction submitted a rather extensive report which included an important new test method for determining the fire retardant properties of wood. The method covers the procedure for tests applicable to untreated wood and wood chemically treated by impregnation to reduce flammability for permanent use in construction. Requirements for performance under this test shall be as prescribed in the specifications applicable to the materials intended for specific uses.

Thermal Insulation

In its first formal report since the committee was organized in 1938, Committee C-16 on Thermal Insulating Materials submitted six important new standards providing needed tests for these products. Included were tests for compressive strength and flexural strength of preformed block type thermal insulating materials; procedures for the sampling of thermal insulating cements and the preparation, by trowel mixing, of the specimens for use in all tests on these cements; also a method covering the procedure for determining the bulk density of thermal insulating cements to permit the calculation of the necessary storage space for a given quantity of cement in packages as received.

The committee in one of its new standards pointed out that wet covering capacity and volume change upon drying are often of major importance in the application of thermal insulating cements. These properties can be easily determined at the same time that the determinations of dry covering capacity are made. Therefore, the procedures for determining these three properties are covered together in these methods.

Another new standard provides methods of test covering the procedures for determining the thickness and density of flexible, felted, or woven thermal insulating blankets, rolls, or batts, with or without reinforcement, composed of fibrous materials.

Building Units and Cement

Revised specifications for gypsum partition tile or block were offered by Committee C-11 on Gypsum. These cover a gypsum building unit in form of tile or block for use in non-load-bearing construction in the interior of buildings and for the protection of columns, elevator shafts, etc., against fire.

The outstanding recommendation of Committee C-1 on Cement was the recommendation to submit to letter ballot of the Society for adoption as a formal standard the Tentative Specifications for Portland Cement (C 150-40 T), as revised, which will replace the Standard Specifications C 9 and C 74, covering portland cement and high-early-strength portland cement, respectively. Minor changes in the test for fineness by means of the turbidimeter (C 115) were for clarification.

There has been a great deal of discussion in the Society's Committee C-12 regarding specifications and tests for mortars for unit masonry. This has been a subject where strong opinions have been expressed on various points and the committee has reached agreement on tentative specifications for mortar for reinforced brick masonry. Two alternative specifications are covered as follows:

Property Specifications in which the acceptability of the mortar is based on the properties of the ingredients (materials) and the properties (water retention and compressive strength) of the mortar mixture.

Proportion Specifications in which the acceptability of the mortar is based on the properties of the ingredients (materials) and a definite composition of the mortar consisting of fixed proportions of the ingredients. The purchaser is required to indicate under which of these specifications the mortar will be accepted.

The Committee on Manufactured Masonry Units submitted new specifications for vitrified clay filter block for trickling filters. Two types of filter block are covered, as follows: *Type I.*—A one-piece filter block suitable for use in constructing a single-course trickling filter floor, which provides continuous drainage channels or ducts through the lower portion of the blocks for the conveyance of liquids from the filter bed and drainage and aeration grilles in the upper portion of the blocks for the passage of liquids from, and air into, the filtering media. *Type II.*

—A two-piece filter block suitable for use in constructing a two-course trickling filter floor, which provides drainage and aeration.

Glass

Committee C-14 on Glass and Glass Products submitted an important definition of the term "glass." In much of the ASTM work, definitions occupy an important place and that is especially true when a relatively new committee is beginning active standardization work. The definition includes reference to certain classes of glass: one-component glasses, two-component glasses, and multi-component glasses, the latter including soda-lime-silica glasses, borosilicate glasses, and other special glasses.

Copies of any of the ASTM Committee reports are available from the American Society for Testing Materials, 260 South Broad Street, Philadelphia.

ASA Starts Work on Defense Projects For Washing Machines and Textiles

TWO meetings held in Washington in September voted to recommend that the American Standards Association undertake preparation of American Defense Emergency Standards for washing machines and for textile definitions, as requested by the Consumer Division of the Office of Price Administration.

The meeting on washing machines recommended that the ASA undertake development of standard methods of test and rating, and minimum performance requirements.

Rating the capacity of washing machines should be on the basis of pounds of dry load, the meeting voted. Various methods of rating are now in use, including ratings based on the pounds of dry load; the total cubic capacity of the tub in gallons; the capacity of the tub in gallons to the water line; the capacity in number of sheets; or a combination of two or more of these.

Since the meeting, this project on washing machines has been authorized by the ASA and two subcommittees have been appointed to start the technical work on the proposed new standards. One will prepare uniform test procedures and performance standards, and the second will prepare a complete draft of an emergency standard. This draft will include definitions, general sections, and safety requirements, but will omit tests and performance standards which will be inserted after the first committee completes its work.

The meeting on definitions for textiles considered specifically denims and broadcloths, and recommended to the ASA that the development of definitions for these materials as requested by Miss Elliott be undertaken under the ASA Defense Emergency Procedure. It was understood, the meeting agreed, that if standard definitions could be developed they would not be immediately applicable to any of the price orders issued by the Price Division of OPA that now affect gray goods, but that they might help clarify the distribution of the various cotton fabrics and decrease the present overlap in the fabrics. It was also understood that agreements on limitations affecting prices and production would be handled solely by Government agencies and not through the American Standards Association.

Principles of Interchangeable Manufacturing

A second edition of *Principles of Interchangeable Manufacturing*, by Earle Buckingham, Professor of Mechanical Engineering, Massachusetts Institute of Technology, has been published by The Industrial Press, New York. The book which has 258 pages and numerous illustrations treats the subject in 13 chapters:

Principles of Interchangeable Manufacturing
Terms Used in Interchangeable Manufacturing
Machine Design in Interchangeable Manufacturing
Purpose of Models
Principles in Making Component Drawings
Practice in Making Component Drawings
Economical Production
Equipment for Interchangeable Manufacturing
Gages in Interchangeable Manufacturing
Inspection and Testing
Manufacturing for Selective Assembly
Small-Quantity Production Methods
Service Factor in Interchangeable Manufacturing

All those interested in problems involving the manufacture of interchangeable parts in the mechanical and related industries will find this treatise a valuable guide—particularly since the defense emergency has stressed the need for economic production, good fitting and ready assembly of components and units.

ASA Library Receives New Foreign Standards

The following is a list of new and revised standards which have been received recently by the American Standards Association, and which are available to members for loan from the ASA Library.

Argentina

La Conversion de Pulgadas en Milimetros (5-P)

Temperatura de Referencia: Medidas lineales (6-P)

Metodo de Ensayo de Dureza Brinell de los Metales y Aleaciones (104-P)

Ensayo del Cincado (111-P)

Placa de Caracteristicas de Maquinas Electricas Rotativas (2017-P)

Dibujo Tecnico: Lineas (4502-P)

Fermatos de Papeles, Cartulinas y Cartones (3001-P)

Australia

Maintenance of Portable Chemical Fire Extinguishers of the Acid-Alkali and Foam Types (CA 18-1941)

Lead Chromes for Paints (K 74-1941)

Prussian Blue for Paints (K 75-1941)

Canada

Lead Service Pipe, Waste Pipe, Traps, Bends and Accessories (No. B67-1941)

Canadian Electrical Code, Part II—Construction and Test of All-Asbestos and Asbestos Varnished Cambric Insulated Wires and Cables (C22.2-No. 28-1941); Construction and Test of Flexible Cords and Fixture Wires, Including Heater Cords (C22.2-No. 49-1941)

Germany

Fahrbara Turmdrehkrana fuer die Bauwirtschaft (E8670)

Prufung von Gummi; Chemische Prufverfahren; Normal-Extraktionsgerat (53555)

Gleich- und Wechselspannungssysteme; Benennungen (40108)

Keramische Isolierstoffe fur die Elektrotechnik; Gruppen und Eigenschaften (40685)

Flankenrachenlehren fur Metrisches Gewinde und Metrische Feingewinde (E91524)

Great Britain

Low Pressure Gas Mantles (884-1941)

Rubber and Insertion Jointing for Flange and Similar Joints Subject to Water Pressure (945-1941)

Designation of Twist in Single Yarns, Folded Yarns and Cables (946-1941)

Yarn Count Systems and Conversions (947-1941)

Cooking Tests for Gas Ovens (948-1941)

Artificial Daylight Fittings for Colour Matching (950-1941)

Earthing Clamps for Use on Metal Pipes of Internal Diameter up to 3 inches (951-1941)

Glass for Glazing including Definitions and Terminology of Work on Glass (952-1941)

Lac (954-1941)

Revised British Standards

Dimensions of Bayonet Lamp-Caps, Lampholders and Lampholder-Plugs (B.C. Adaptors) for Voltages Not Exceeding 250 Volts (52-1941) (Revision of 52-1936)

Porcelain and Toughened Glass Insulators for Overhead Power Lines (3.3 kV and Upwards) (137-1941) (Revision of 1930 edition)

Traction Motors and Associated Rotating Elec Machines for use on Rail or Road Vehicles (173-1941) (Superseding B.S. 173-1928)

Electrical Performance of High-Tension Transformers for X-Ray Purposes (326-1941) (Superseding B.S. 326-1928)

Brass Tubes, Tubes for Screwed Glands and Screwed Glands for Condensers (378-1941) (Superseding B.S. 378-1930 and B.S. 3000-1921)

Materials for Horizontal Damp-proof Courses including Classification for Bituminous Damp-proof Courses (743-1941) (Superseding B.S. 743-1937)

British War Emergency Standards

Capacitors for Radio Receivers (271-1941)

Ready Mixed Paints, Priming Paint, Undercoating Paints, Finishing Coat Paints—Oil Gloss (929-1940)

Photographic Exposure Tables (935-1941)

Method to Determine the Speed of a Specific Sample of a Photographic Negative Material intended for Snapshot Work in Daylight (943-1941)

Cast Brass Bars (suitable for Forging) and Forgings (944-1941)

Strength Tests for the Protective Toe-Caps of Boots for Industrial Purposes (953-1941)

Revised British War Emergency Standards

Schedules of Sizes of Tins and Cans for Food Products for British Packers in the U.K. for the Home Trade (866-IR-Part 1-1940); for Commodities other than Food Products for British Packers in the U.K. for the Home Trade (866-IR-Part 2-1940)

Sweden

Metric threads (2B)

Ball Bearings (30B)

Single thrust bearings (83A)

Double thrust bearings (290A)

Wheels with solid rubber rim (489)

Round threads for filter frame on gas appliances (680)

Wash basin drain valve (1044)

Bath tub drain valve (1046)

Drain valve taper plugs for wash basins and sinks (1047)

Fitting for connection between wash basin drain valve and water trap (1048)

Valves for gas cylinders (Reprint 217)

Construction of plug gages and internal thread gages (Reprint 218)

Threads of Edison type (Reprint 219)

Standardization of hooks for cranes (Reprint 220)

Standardization of gas cylinders for condensed industrial and medical gases (Reprint 221)

H. B. Bryans Is New Member On ASA Board of Directors

HENRY B. BRYANS, executive vice-president and director of the Philadelphia Electric Company, is the most recent new member of the Board of Directors of the American Standards Association. Mr. Bryans was nominated by the Edison Electric Institute, member of the ASA Electric Light and Power Group, to succeed John C. Parker, who resigned recently. Mr. Parker, vice-president of the Consolidated Edison Company of New York, had been a member of the Board since 1932 as a nominee of the Edison Electric Institute.

Mr. Bryans has been with the United Gas Improvement Company or one of its associated companies continuously since entering their employ as mechanical engineer in 1907. Since 1927 he has served successively as general superintendent of the Philadelphia Suburban-Counties Gas & Electric Company; assistant general manager; assistant general manager of the Philadelphia Electric Company; vice-president in charge of operations; executive vice-president; and director.

Mr. Bryans is a member of the American Institute of Electrical Engineers, the American Society of Mechanical Engineers, and the Franklin Institute.

South American Countries Join In Standardization Organization

SOUTH AMERICA is about to complete the organization of a continent-wide standardization association, the Comité Sudamericano de Normas, as a means of unifying and coordinating the standardization work now being carried on by the different national standardizing associations in South America. An organization committee held its first meeting in the offices of the Argentine national standardizing body July 7. Marcelino A. Ceriale, president of the Instituto Argentino de Racionalization de Materiales, is chairman of this organization committee and Alejandro R. Hermida, also of IRAM, was elected secretary.

Organization of the Comité Sudamericano de Normas was undertaken as the result of a resolution adopted by the directors of the South American Union of Engineering Associations at the Union's annual convention in Peru early this year. Existing standardization associations in South America will be eligible for membership, but in countries where no such associations have yet been set up, the engineering societies will be admitted to membership.

Although the influence of engineers on standardization in South America is preponderant at the present time, the organization committee resolved that the active assistance being given by other professions must not be underestimated. The committee also referred to the importance of obtaining official support through diplomatic action.

A meeting of representatives from the entire membership of the new association is planned early in October to adopt a constitution and to consider a plan of action.

The new association promises to "produce solidarity of action between the South American countries which must face, with mutual concern and urgency, the many problems presented by the present emergency situation and which they must translate into definite industrial development," announcement of the meeting published in the official bulletin of IRAM declares.

New Association and Government Standards

(See "ASA Standards Activities", page 282, for new American Standards and progress on ASA projects)

Since the publication of the September issue of INDUSTRIAL STANDARDIZATION, the ASA Library has received for its classified files copies of standards and specifications from the organizations listed below.

These standards may be consulted by ASA Members at the ASA Library.

Anyone desiring copies for his own use should write direct to the organization issuing the standard.

Associations and Technical Societies

Glass Container Association of America (19 West 44th Street, New York, N. Y.)

Standard Beer Bottles July 1941

National Electrical Manufacturers Association (155 East 44th Street, New York, N. Y.)

NEMA Power Switching Equipment Standards No. 41-65 October 1940 75¢

Porcelain Enamel Institute, Inc. (612 N. Michigan Avenue, Chicago, Ill.)

Test for Acid Resistance of Porcelain Enamels, Part 1—Flatware April 1940 20¢

Impact Test for Laboratory Specimens of Porcelain Enameled Sheet Iron and Steel (tentative standard) August 1940 25¢

Test for Sagging of Iron and Steel Sheets for Porcelain Enameling (tentative standard) October 1940 20¢

Torsion Test for Laboratory Specimens of Porcelain Enameled Sheet Iron and Steel (tentative standard) September 1940 25¢

Ball Mill Wet Grinding of Porcelain Enamels October 1939 25¢

Recommended Materials and Practice for Architectural Porcelain Enamel January 1939 40¢

Reflectance Test for Opaque White Porcelain Enamels March 1937 10¢

Test for Resistance of Porcelain Enamels to Surface Abrasion (tentative standard) October 1938 10¢

Tentative Screen Test for Wet-Milled Porcelain Enamel November 1938 10¢

Specifications for Architectural Porcelain Enameled Parts June 1940

Specifications for First Quality Tops for Breakfast Sets, Dinette Sets, Kitchen Tables and Kitchen Cabinets No. 161 September 1940

Safe Manufacturers National Association (366 Madison Avenue, New York, N. Y.)

SMNA Specification F1-D, F1-ND for Fire Insulated Safes; F2-ND for Fire Insulated Containers; F3 for Fire Insulated Vault Doors; F4 for File Storage Room Doors; F5-NT for Light Insulated Containers 12-B, 12-C, 12-D, 12-E, 12-F 1939

SMNA Specification B1 for Burglary-Resistive Chests 12-G 1939

SMNA Specification R1 for Robbery-Resistive Containers 12-H 1939

SMNA Specification M1 for Deposit Chute Containers 12-I 1939

Society of Motion Picture Engineers (Hotel Pennsylvania, Seventh Avenue and 33rd Street, New York, N. Y.)

Recommended Procedure and Equipment Specifications for Educational 16-Mm Projection May 1941

Southern Pine Inspection Bureau of the Southern Pine Association (Canal Building, New Orleans, La.)

Standard Specifications for Southern Pine Lumber July 1, 1939 15¢

Underwriters' Laboratories, Inc. (161 Sixth Avenue, New York, N. Y.)

Standard for Electric Lighting Fixtures and Portable Lamps, 3rd edition September 1941

United States Government

National Bureau of Standards (Washington, D.C.) Commercial Standards

In Print (Copies available from Superintendent of Documents, Government Printing Office, Washington, D. C.)

Moisture Regains of Cotton Yarns CS-11-41 2nd edition, 1941

Calking Lead CS94-41

Lead Pipe CS95-41

Lead Traps and Bends CS96-41

Simplified Practice Recommendations

Accepted by Industry and Promulgated

Forged Hatchets R160-41

Large-Tube Cast-Iron Radiators R174-41

In Print (Copies available from Superintendent of Documents, Government Printing Office, Washington, D.C.)

Hospital Plumbing Fixtures R106-41

Copper Conductors for Building Purposes R180-41

Federal Specifications Executive Committee (U. S. Treasury Department, Washington, D. C.)

The date after the title of the specification indicates when the specification becomes effective.

Federal Specifications

(Copies available from Superintendent of Documents, Government Printing Office, Washington, D. C.)

Blinds; venetian, wood-slat (Amendment-2) LLL-B-441 November 1, 1941

Boards, Pantry; wood (New) LLL-B-576 December 1, 1941

Bowls, wood (New) LLL-B-621 December 1, 1941

Boxes; wood-cleated-fiberboard (Amendment-1) NN-B-591 October 1, 1941

Brushes; Glue, Flat (Amendment-1) H-B-291 December 15, 1941

Brushes, Paint; Metal-Bound, Flat (Medium-Grade) (Amendment-1) H-B-431 December 15, 1941

Brushes; Sash-Tool (Amendment-1) H-B-491a December 15, 1941

Brushes; Varnish, Flat (Double X Thickness) (Amendment-1) H-B-701 December 15, 1941

Cans; Safety (For Gasoline, Naphtha, etc.) (New) RR-C-92 December 1, 1941

Cement; Portland (Superseding SS-C-191a) SS-C-191b November 15, 1941

Cement; Portland, Moderate-heat-of-hardening (Superseding SS-C206) SS-C-206a November 15, 1941

Cement; Portland, sulphate-resisting (Superseding SS-C-211) SS-C-211a November 15, 1941

Cleaners, file; combination (brush and card) (New) H-C-421 November 15, 1941

Copper; Bars, Plates, Rods, Shapes, Sheets, and Strips (Superseding QQ-C-501) QQ-C-501a December 15, 1941

Cotton-Batting; non-absorbent, unbleached (New) CCC-C-606 December 1, 1941

Enamel; water-resisting, red (Amendment-2) TT-E-531a November 1, 1941

Fans, electric; bracket and desk types, rigid blades (for shore use) (Amendment-1) W-F-101a November 1, 1941

Ham; canned, whole (New) PP-H-61 October 1, 1941

Hardware, builders'; doorclosers (Amendment-1) FF-H-121a October 15, 1941

Hoes; garden and mortar (New) GGG-H-496 November 15, 1941

Hose, Fire; cotton, rubber-lined (Superseding ZZ-H-451) ZZ-H-451a November 15, 1941

Hose; gasoline, wire-stiffened (Amendment-1) ZZ-H-471 November 1, 1941

Hose; spray (Amendment-2) ZZ-H-521 November 1, 1941

Kerosene (Superseding VV-K-211) VV-K-211a November 1, 1941

OPM Will Select List Of Steel Specifications

At the request of the Office of Production Management, the American Society for Testing Materials, the Society of Automotive Engineers, and the American Iron and Steel Institute will carry out a project to select the minimum number of steel specifications, compositions, and sections necessary to meet the requirements of national defense. The project will be carried out by these three organizations in collaboration with the War and Navy Departments, under the general supervision of the OPM. An Administrative Committee to direct the work has been formed of representatives of these five groups with advisors from other interested organizations. The committee is headed by C. L. Warwick, Consultant, Office of Production Management, who is secretary-treasurer of the ASTM.

The goal of the project as defined by the Administrative Committee at its first meeting September 12 is to establish as promptly as possible a selected list of steel specifications, to be designated National Emergency Steel Specifications.

It is believed that the productive capacity of the steel industry, and of the manufacturing industries using steel for defense equipment, can be materially increased within present facilities by concentration of production upon a reduced number of steels, particularly with respect to alloy steels, the OPM Division of Purchases explains. Consideration will necessarily be given to non-defense requirements for steel in establishing the List of National Emergency Steel Specifications, OPM announcement of the new project declares. It is the intention of OPM, through its Iron and Steel Section, to use the list as an aid in administering steel priorities and allocations.

A classification of steel products has been made as the result of work done by a committee organized by the ASA Company Member Forum. This committee carried out exploratory investigations on the problem of steel specifications and it is expected that the work which they did will be of use to the OPM in the development of a selected list.

Committees of technical representatives of both users and producers of steel are being organized to handle the work, the OPM announces. It is expected that the committees on carbon and alloy steel plates, and on aeronautic steels will be the first to get under way.

Western States to Work for Uniform Safety Standards

SAFETY standards must be uniform in all states if industrial safety is to be achieved most efficiently and economically, the Western States Safety Conference decided at its Sixth Annual Convention, September 22-26. The conference voted to recommend adoption of uniform safety standards in the eleven Western states which are members of the conference and adopted a resolution setting up machinery to make it possible to carry out such action.

To bring about the recommended uniformity of safety standards a code standardization committee is to be appointed by each group represented in the conference, the chairman of each group committee to be a member of a permanent Western States Safety Conference Committee on Industrial Code Standardization. This permanent committee will have the responsibility of acting as the coordinating agency for industrial safety standards in the western states, and as a board of review to recommend safety standards to the various state agencies as the necessity for adopting such standards arises.

The long-range program of the committee will be to work towards the establishment of a standard set of industrial codes covering all activities. When accepted, these codes will have the official approval of the Western States Safety Conference and will be recommended for adoption by all states either to replace present standards or to be available for adoption as the need arises in the various states. One of the functions of the standardization committee will be to act as an authoritative advisory board to the various state agencies in all matters pertaining to code compilation and code adoption.

To Recognize American Standards

The conference recommended that all national and international standards developed by such agencies as the American Standards Association be given full recognition. "Such codes," the conference declared, "represent the best authority on standards and as such should be the basis of all standards developed under any directives of this conference. It is recommended that such codes as may be promulgated by any of the eleven western states or under the sponsorship of the Western Safety Conference be made acceptable to the American Standards Association."

Action to establish the new standardization committee was taken as the result of a thoroughgoing

New standardization committee will act as coordinating agency for safety standards in eleven states

survey carried out by a committee appointed at the Sixth Annual Convention of the Western States Safety Conference in October, 1940. The survey committee reported in detail to the 1941 Annual Convention, quoting comments concerning the value of uniform standards gathered from ten large industries, in addition to a group of industries in general, insurance agencies, and state and federal governmental agencies. The replies showed overwhelming support for the principle of uniform standards, the objections to standardization being based almost entirely on two general ideas (1) That uniform standards are not practical for all parts of the country; and (2) That there are too many regulations now.

Summarize Benefits of Uniformity

On the other hand, the benefits of uniform safety standards were summarized by the committee from the replies as follows:

1. Better codes, more authoritative and better prepared
2. Establishment of national standards for machine and equipment guards which will materially assist manufacturers
3. Uniformity for firms operating in two or more states
4. Uniformity for workers moving from one state to another
5. Elimination of diverse items in manufacture
6. Less costly

One aircraft company commented:

"In the matter of guarding machinery, I know that machine manufacturers have in some instances neglected to construct guards into their machines because, while the one guard may be acceptable in the State of California, it would not be acceptable in the State of Ohio because of conflicting safety orders . . ."

Other comments included:

"Safety code standardization would save all companies considerable money, inasmuch as the necessity for experimentation with different types of safety equipment would be eliminated."

"We cannot overlook the importance standardization would have in the promotion of better accident prevention work."

"Workmen would be better able to become familiar with safety codes."

". . . individuals moving from one job to another in various states, or one operation having business in two states, would become familiar with one safety code instead of several."

"Equalize operating costs — coordination by management — comparable protection of workers at all properties."

"Companies operating interstate will have same standards."

"Findings of the American Standards Association, the National Bureau of Standards, and the National Safety Council should be used as a basis for all standard codes. Variations of these standard codes could be made to suit different localities if found to be necessary."

The report of the survey committee recommending the development of uniform safety standards and appointment of the committee on Industrial Code Standardization was adopted verbatim and unanimously by the convention.

Accepting the report the delegates voted that they "resolve that standardization of industrial codes in the eleven western states represented at this conference is both advisable and feasible, that such standardization is favorable to the majority of the interests involved, and that such standardization of all industrial codes should be accomplished."

Eleven states are represented in the Western States Safety Conference:

Arizona	Nevada
California	New Mexico
Colorado	Oregon
Idaho	Utah
Montana	Washington

Wyoming

In addition, British Columbia, Mexico, the Territory of Hawaii, and the Territory of Alaska have affiliated representation.

Cyril Ainsworth, assistant secretary of the American Standards Association, who is in charge of the ASA work on safety standards, is now on a trip to the West Coast and took part in the program of the West Coast Safety Conference at Seattle.

NFPA Meeting Hears Reports On New and Revised Standards

Fire defense is principal theme of 1941 session

by Percy Bugbee

General Manager, National Fire Protection Association

MORE than 1,000 members were present at the 45th Annual Meeting of the National Fire Protection Association in Toronto, May 12-16, to discuss fire defense, the acknowledged problem confronting fire authorities in this country and Canada, and to hear reports of NFPA technical committees.[1]

Prior to the general sessions, the Fire Marshals Section as well as the Marine and Volunteer Firemen's Sections of the Association held meetings. Highlighting the Fire Marshals' meeting was a lecture by Lewis Partington, Auxiliary Fireman who was present during the German attack on Coventry, England. Another speaker at the meeting was H. H. Clegg, Assistant Director of the Federal Bureau of Investigation.

The Marine Section of the Association, which is responsible for fire protection standards relative to ships and shipyards, heard a paper on "Shipyard Fire Protection" by C. A. Vlachos, Captain H. C. Shepheard of the Bureau of Marine Inspection and Navigation addressed the group on the new motor craft rules.

ASA Committee Reports

Two new standards were reported to the National Fire Protection Association by the ASA Sectional Committee on Safety Codes for the Prevention of Dust Explosions (Z12) which is working under the sponsorship of the NFPA. One of these proposed new standards provides

[1] Reports of the technical committees and new standards are available from the NFPA office, 60 Batterymarch Street, Boston, Mass.

good practice requirements for the application of suction and venting for the control of dust in grain elevators and storage units, and the other provides a Code for the Prevention of Dust Ignitions in Country Grain Elevators. Changes in the American Standard Safety Code for the Use of Inert Gas for Fire and Explosion Prevention were proposed jointly by this committee and the NFPA Committee on Special Extinguishing Systems. The change would add a sentence providing for carbon monoxide alarms or recorders to protect operators where inert gas is liberated in a room.

One important new standard recommended to the NFPA by its Committee on Gases provides recommended safe practice for the use of combustible anesthetics in hospital operating rooms.

A suggested ordinance providing regulations for storage, transportation, and use of explosives was adopted.

Standards submitted for tentative adoption by the NFPA include Recommended Requirements for Flameproofed Textiles Subject to Laundering or Weather Exposure, and a Field Test for Flameproofed Textiles.

Revisions and additions to the fourth edition of the Table of Common Hazardous Chemicals, published by the NFPA, include new definitions of Ignition Temperature, Flammable Limits, and Explosive Range. Additions to the table are benzoyl peroxide, hydrogen peroxide, and zinc, with revisions under the subjects of charcoal, hydrochloric acid, magnesium, potassium, potassium peroxide, sodium, sodium peroxide.

Amendments to the 1933 edition of the Standards for Carbon Dioxide Fire Extinguishing Systems were adopted on recommendation by the Committee on Special Extinguishing Systems.

During recent years static electricity has been recognized as the cause of many serious fires and explosions, the Committee on Static Electricity reported in presenting a new informative pamphlet on the subject. The pamphlet discusses the theory of static electricity, processes where static electricity is a hazard, hazards to workmen, methods of preventing static accumulations, and instruments for detecting, measuring, and recording static electricity.

New methods for the construction and installation of tanks, gravity and pressure towers, etc., were adopted as a standard.

A defense note was present in the report of the Committee on Municipal Fire Apparatus which prepared for tentative adoption a report on Auxiliary Pumpers including trailer pumps such as those which have been used extensively in England by the British Fire Service.

The subject of fire defense was given considerable attention by the Association. Among those who spoke on this subject was Howard Johnson, General Manager of the Midland (Ontario) Shipyards who spoke on Fire Safety in Defense Industries. Mr. Johnson was formerly with a large shipbuilding concern in the dockland area in London and had seen a great deal of wartime ARP work in operation.

ASA Standards Activities

Approved Standards Available Since Publication of Our September Issue

T-Slots, Their Bolts, Nuts, Tongues and Cutters (Revision of B5a-1927, from status of American Tentative Standard) American Standard B5.1-1941 35¢

Jig Bushings (Revision of B5.6-1935) American Standard B5.6-1941 35¢

Preferred Thicknesses for Uncoated Thin Flat Metals (Under 0.250 In.) American Standard B32.1-1941 25¢

Standard Vacuum Tube Base and Socket Dimensions (Revision of C16c-1932) American Standard C16.2-1939 20¢

Manufacturing Standards Applying to Broadcast Receivers (Revision of C16d-1932) American Standard C16.3-1939 20¢

Attachment Plugs and Receptacles American Standard C73-1941 30¢

Safety in Electroplating Operations American Standard Z9.1-1941 30¢

Compiling Industrial Accident Causes American Recommended Practice Z16.2-1941 $1.00

Specifications for Portable Steel and Wood Grandstands American Standard Z20.1-1941 60¢

Standards Approved Since Publication of Our September Issue

Screw Thread Gages and Gaging American Standard B1.2-1941

Acme and Other Translating Threads American Standard B1.3-1941

Standards Now Being Considered by Standards Council for ASA Approval

Manhole Frames and Covers for Subsurface Structures A35.1

Specifications for Gypsum (ASTM C 22-25) (Revision of A49.1-1933)

Keyways for Holes in Gears B6.4

Cast-Iron Pipe Flanges and Flanged Fittings, Class 250 (Revision of B16b-1928)

Safety Code for Jacks B30

Gage Blanks CS 8-41 (Revision of B47-1933)

Protection of Structures Containing Inflammable Liquids and Gases—Part 3 of Code for Protection Against Lightning (From status as American Tentative Standard to American Standard) C5, Part 3

Methods of Test for Impact Resistance of Electrical Insulating Materials C59.11
Specifications for Rubber Gloves for Electrical Workers ASTM D 120-40) C59.12
Commercial Standards for Sun Glass Lenses (CS 78-39; CS 79-39)
Specifications for Black and Hot-Dipped Zinc-Coated (Galvanized) Welded Seamless Steel Pipe for Ordinary Uses (ASTM A120-36) (Revision of G8.7-1937)
Specifications for Free-Cutting Brass Rod for Use in Screw Machines (ASTM B16-29) (Revision of H8-1934)
Specifications for Copper Water Tube (ASTM B88-39) (Revision of H23.1-1939)
Specifications for Zinc Oxide (ASTM D79-39) (Revision of K22-1939)
Specifications for Basic Carbonate White Lead (ASTM D81-38) (Revision of K23-1939)
Specifications for Red Lead (ASTM D83-39) (Revision of K24-1939)
Specifications for Mineral Iron Oxide (ASTM D84-40) (Revision of K25-1940)
Specifications for Lampblack (ASTM D209-30) (Revision of K26-1937)
Specifications for Chrome Yellow (ASTM D211-40) (Revision of K27-1940)
Specifications for Reduced Chrome Green (ASTM D213-40) (Revision of K28-1940)
Specifications for Prussian Blue (ASTM D261-40) (Revision of K29-1940)
Specifications for Reduced Para Red (ASTM D264-40) (Revision of K31-1940)
Specifications for Bone Black (ASTM D210-30) (Revision of K36-1937)
Specifications for Chrome Oxide Green (ASTM D263-40) (Revision of K37-1940)
Specifications for Titanium Dioxide Pigments (ASTM D476-39) (Revision of K45-1939)
Specifications for Basic Sulfate White Lead (ASTM D 82-38) K47
Specifications for Blue Lead: Basic Sulfate (ASTM D 405-38) K48
Specifications for C.P. Para Red Toner (ASTM D 475-40) K49
Specifications for C.P. Zinc Yellow (Zinc Chromate) (ASTM D 478-40) K50
Methods of Test for Alkalinity or Acidity of Pigments (ASTM D 278-31) K51
Methods of Test for Bleeding of Pigments (ASTM D 279-31) K52
Methods of Test for Hygroscopic Moisture (and Other Matter Volatile Under the Test Conditions) in Pigments (ASTM D 280-33) K53
Methods of Test for Oil Absorption of Pigments (ASTM 281-31) K54
Methods of Test for Acetone Extract in Dry Lampblack and Dry Bone Black (ASTM D 305-31) K55
Methods of Test for Tinting Strength of White Pigments (ASTM D 332-36) K56
Methods of Test for Mass Color and Tinting Strength of Color Pigments (ASTM D 387-36) K57
Methods of Chemical Analysis of Yellow and Orange Pigments Containing Chromium Compounds, Blue Pigments, and Chrome Green (ASTM D 126-36) K58
Methods of Chemical Analysis of Dry Mercuric Oxide (ASTM D 284-33) K59
Methods of Testing and Tolerances for Tubular Sleeving and Braids (ASTM D354-36) (Revision of L13-1941)
Proposed American Recommended Practice for the Use of Explosives in Anthracite Mines M27
Specifications for Drinking Fountains Z4.2
Safety Code for Laundry Machinery and Operations (From status as American Tentative Standard to American Standard) Z8
Test for Carbon Residue of Petroleum Products (ASTM D189-39) (Revision of Z11.25-1939)
Test for Distillation of Gas Oil and Similar Distillate Fuel Oils (ASTM D158-38) (Revision of Z11.26-1938)
Test for Distillation of Crude Petroleum (ASTM D285-36) (Revision of Z11.32-1936)
Test for Distillation of Plant Spray Oils (ASTM D447-41) Z11.43
Test for Vapor Pressure of Petroleum Products (ASTM D323-31) Z11.44
Method for Calculating Viscosity Index (ASTM D567-41) Z11.45
Method of Conversion of Kinematic Viscosity to Saybolt Universal Viscosity (ASTM D446-39) Z11.46
Gas Water Heaters (Revision of Z21.10-1937)
Listing Requirements for Attachable Gas Water Heating Units (Revision of Z21.26-1937)
Approval Requirements for Gas Counter Appliances Z21.31
Graphical Symbols for Use on Drawings in Mechanical Engineering (Revision of Z14.2-1935) Z32.11
Public Approval and Certification Procedures Z34

Withdrawal of Approval Being Considered

Method of Test for Knock Characteristics of Motor Fuels (ASTM D357-40) Z11.37-1940 (To be revised and reverted to tentative)

Defense Emergency Standards

Standards Under Way

Automatic Refrigerators B38
Allowable Concentration of Acetone Z37
Allowable Concentration of Azides, Lead and Sodium Z37
Allowable Concentration of Cadmium Z37.5
Allowable Concentration of Ether Z37
Allowable Concentration of Manganese Z37
Allowable Concentration of Tetryl Z37
Allowable Concentration of TNT Z37
Allowable Concentration of Xylol Z37
Domestic Washing Machines

Requests for Projects Being Considered

Definitions of Textiles
Electric Flat-irons

Shirt and Pajama Manufacturers To Start Simplification Program

A resolution urging the industry to work out a simplification program for men's shirts and pajamas was unanimously adopted by the National Association of Shirt and Pajama Manufacturers September 11. In carrying out the program, the Consumer Division of OPA is expected to make recommendations for standardizing design, color, and fabrics, sizes and shrinkage factors, accurate and informative labeling, and wrapping material and method of packing.

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